C L A I M S

1. A method for processing an organosiloxane film, the method comprising:

loading a target substrate with a coating film formed thereon into a reaction chamber, the coating film comprising a polysiloxane base solution having an organic functional group; and

performing a heat process on the target substrate within the reaction chamber to bake the coating film,

wherein the heat process comprises

a temperature setting step of setting an interior of the reaction chamber at a process temperature by heating, and

a supplying step of supplying a baking gas into the reaction chamber set at the process temperature, while activating the baking gas by a gas activation section disposed outside the reaction chamber.

2. The method according to claim 1, wherein the process temperature ranges from 250 to 400℃.

3. The method according to claim 1, wherein the gas activation section is configured to activate the baking gas by means of heat, light, plasma, or a catalyst.

4. The method according to claim 1, wherein the baking gas is selected from the group consisting of ammonia gas, dinitrogen oxide gas, nitrogen oxide gas, hydrogen gas, argon gas, and nitrogen gas.

5. The method according to claim 1, wherein the gas activation section is configured to activate the baking gas by bringing the baking gas into contact with a catalyst, while supplying the baking gas with energy from a medium selected from the group consisting of heat, light, and plasma.

6. The method according to claim 5, wherein the catalyst is selected from the group consisting of tungsten, platinum, and titanium oxide.

7. An apparatus for processing an organosiloxane film, by performing a heat process on a target substrate with a coating film formed thereon to bake the coating film, the coating film comprising a polysiloxane base solution having an organic functional group, the apparatus comprising:

a reaction chamber configured to accommodate the target substrate;

a temperature adjusting section configured to adjust temperature inside the reaction chamber;

a gas supply section configured to supply a baking gas into the reaction chamber;

a gas activation section disposed outside the reaction chamber and configured to activate the baking gas;

an exhaust section configured to exhaust gas inside the reaction chamber; and

a control section configured to control the

temperature adjusting section, the gas supply section, the gas activation section, and the exhaust section.

8. The apparatus according to claim 7, wherein the gas activation section is configured to activate the baking gas by means of heat, light, plasma, or a catalyst.

9. The apparatus according to claim 7, wherein the baking gas is selected from the group consisting of ammonia gas, dinitrogen oxide gas, nitrogen oxide gas, hydrogen gas, argon gas, and nitrogen gas.

10. The apparatus according to claim 7, wherein the gas activation section is configured to activate the baking gas by bringing the baking gas into contact with a catalyst, while supplying the baking gas with energy from a medium selected from the group consisting of heat, light, and plasma.

11. The apparatus according to claim 10, wherein the catalyst is selected from the group consisting of tungsten, platinum, and titanium oxide.

12. The apparatus according to claim 7, wherein the control section is configure to execute the heat process to comprise

a temperature setting step of setting an interior of the reaction chamber at a process temperature by heating, and

a supplying step of supplying the baking gas into the reaction chamber set at the process temperature,

while activating the baking gas by the gas activation section disposed outside the reaction chamber.

13. The apparatus according to claim 7, wherein the process temperature ranges from 250 to 400℃.